

### **REMARKS/ARGUMENTS**

The Office Action mailed September 24, 2003 has been reviewed and carefully considered. Claims 1-8 are canceled. Claims 9-19 are added. Claims 9-19 are pending in this application, with claim 9 being the only independent claim. Reconsideration of the above-identified application, as herein amended and in view of the following remarks, is respectfully requested.

In the Office Action mailed September 24, 2003, claims 1, 3, and 4 stand rejected under 35 U.S.C. §112, first paragraph, as failing to provide an adequate description of the claim limitations in the specification. The Examiner found that the phrases "advanced" and "move in one way" to be problematic. Applicant has canceled independent claim 1 and now presents new independent claim 9 that does not use either of these phrases. Accordingly, the rejection under 35 U.S.C. §112, first paragraph, should now be withdrawn.

Claims 1, 3, and 4 stand rejected under 35 U.S.C. §112, second paragraph as being indefinite because of the phrases "advanced" and "move in one way". As previously stated, independent claim 1 is canceled and new independent claim 9 is presented that does not include the phrases "advanced" and "move in one way". Accordingly, the rejection under 35 U.S.C. §112, second paragraph, should now be withdrawn.

Claims 1, 3, and 4 stand rejected under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 5,281,289 (Debroche '289) or U.S. Patent No. 5,395,476 (Debroche '476).

Claims 1, 3, and 4 stand rejected under 35 U.S.C. §103 as unpatentable over Debroche '289 or Debroche '476 in view of U.S. Patent No. 4,640,164 (Pavlov) and/or U.S. Patent No. 6,032,560 (Puchovsky).

Before discussing the cited prior art and the Examiner's rejections of the claims in view of that art, a brief summary of the present invention is appropriate. The present invention

relates to a process for cutting a reinforcement cord and applying a cut section of the reinforcement cord onto a tire (see paragraph 0007 of the specification). According to the invention, a reinforcement cord is guided to a cutoff point (see paragraph 0021). A knife 42, 142 is mounted on a knife-supporting disk 43, 143 which is rotatable about a shaft 45, 144 (see paragraphs 0021 and 0026). The knife-supporting disk 43, 143 is connected to an input shaft 48, 148 by a drive connection. In Fig. 2 the drive connection is a planetary gear arrangement and in Figs. 5-6 the drive connection is a belt arrangement. The input shaft 48, 148 is driven by a motor.

As the knife-supporting disk is rotated, the knife passes proximate the cutoff point. However, the knife passes through the cutoff point only every n times that the knife passes proximate the cutoff point (see paragraphs 0022 and 0026). In the embodiment of Fig. 2, the gear ratio of the planetary gear arrangement is such that the knife-supporting disk, which is connected to the planetary gear, passes through the cutoff position every n times that the knife passes proximate the cutoff point. In the embodiment of Figs. 5 and 6, the input shaft is connected to a cam 146 which moves the knife-supporting disk such that the knife passes the cutoff point every n times that the knife passes proximate the cutoff point. In both embodiments, only the speed of the input shaft controls both the speed of the knife and the cutting interval, i.e., the interval of time between two successive passes of the knife through the cutoff point.

New independent claim 9 now specifically recites that the knife passes through the cutoff point only every n times that the knife passes proximate the cutoff point. Support for this limitation is found in the specification at paragraph 0022 and Figs. 3 and 4. New independent claim 9 further recites rotating and moving the knife-supporting disk by the drive connection in response to only the driving of the input shaft such that knife speed and the cutting interval at which the reinforcement cord is cut are both controlled only by the selected input shaft rotational speed,

wherein the drive connection moves the knife along a closed path which passes proximate the cutoff point, and passes through the cutoff point only every n passes of the knife proximate the cutoff point. Support for this limitation is found in the specification at paragraph 0021 and 0026 and Figs. 2, 5, and 6. In both examples described in the specification (i.e., the planetary gear assembly of Figs. 2-4 and the cam and belt drive of Figs. 5-6), only the rotation of the input shaft is required to rotate and move the knife-supporting disk such that the knife passes the cutoff point every n times that the knife passes proximate the cutoff point. This arrangement provides a major advantage over the prior art because, since the knife speed and cutting interval are both controlled by the selected input shaft rotational speed, no further sensors, clutch systems, pulse generators, or other controls are required when it is desired to actuate a cut.

Debroche '289 and Debroche '476 each discloses machines for applying reinforcement sections on tires. The Examiner states that cutter 84 in Fig. 7 of Debroche '289 and cutter 85 in Fig. 1 of Debroche '476 disclose the present invention. These references depict cutters that cut the reinforcement cord during each rotation of the knife. The Examiner notes that independent claim 1 did not require that the knife only passes through the cutoff point every n passages. New independent claim 9 now requires that the step of cutting includes cutting the cord only every n passages of the knife proximate the cutoff point.

Also, worthy of note is the fact that neither of these references discloses or teaches rotating and moving the knife in response only to the driving of an input shaft. Moreover, neither of these references discloses or teaches controlling both knife speed and the cutting interval based only on the related input shaft rotational speed.

Accordingly, it is respectfully submitted that independent claim 9 is not anticipated by Debroche '289 or Debroche '476 under 35 U.S.C. §102. Furthermore, it is respectfully submitted that independent claim 9 is also allowable over Debroche '289 or Debroche '476 under 35 USC 103.

Pavlov discloses a high speed wire cutter having an upper assembly 200' and a lower assembly 200 (see Figs. 2a-2e of Pavlov and col. 5, lines 47-56). Each of these assemblies has a blade assembly 212 having a knife carrier 285 and a knife blade 276 (col. 6, lines 62-63). The blade assembly 212 is disposed on a carrier shaft 216 (col. 5, lines 63-66). A coupler 218 selectively couples the carrier shaft 216 to a drive shaft 214, which is driven by a motor (col. 6, lines 46-61). When the carrier shaft 216 and drive shaft 214 are not coupled, the carrier shaft 216 is stationary and the cutting edge of the knife is moved as the assembly 200 rotates (col. 7, lines 6-19). When the carrier shaft 216 and drive shaft 214 are coupled, the assembly 200 is in the non-cutting mode and the blade does not reciprocate (col. 8, lines 11-18). As disclosed at col. 8, lines 29-56, the coupler 18 of Pavlov operates in response to a sensor 298 which is electrically connected to the coupler 18. According to Pavlov, the blade is moved into cutting position in response to the electrical signals from the sensor.

In contrast to using a sensor for selectively operating a coupler when it is desired to cut a wire, independent claim 9 of the present application recites rotating and moving the knife-supporting disk by the drive connection in response to only the driving of the input shaft such that a knife speed and the cutting interval at which the reinforcement cord is cut are both controlled only by the selected input shaft rotational speed, wherein the drive connection moves the knife along a closed path which passes proximate the cutoff point, but passes through the cutoff point only every n passes of the knife proximate the cutoff point, wherein n is greater than or equal to two.

Accordingly, it is respectfully submitted that independent claim 9 is allowable over Debroche '289 or Debroche '476 in view of Pavlov.

Puchovsky discloses a trimming shear having two blade holders 26 with blades 28 which are continuously rotated by a transmission. Each blade holder is mounted on a carrier shaft which is held in an eccentric sleeve 20. The sleeves 20 are selectively connected to the transmission by a clutch brake unit 56 to rotate and thereby move the blades into and out of a cutting position. As stated at col. 2, lines 51-53, engagement of the clutch brake unit 56 is on demand. Accordingly, the drive of Puchovsky changes state when a cut is desired.

In contrast, independent claim 9 of the present application recites rotating and moving the knife-supporting disk by the drive connection in response to only the driving of the input shaft such that knife speed and the cutting interval at which the reinforcement cord is cut are both controlled only by the selected input shaft rotational speed, wherein the drive connection moves the knife along a closed path which passes proximate the cutoff point, but passes through the cutoff point only every n passes of the knife proximate the cutoff point, wherein n is greater than or equal to two. Accordingly, it is respectfully submitted that independent claim 9 is allowable over Debroche '289 or Debroche '476 in view of Puchovsky.

Dependent claims 10-19, being dependent on independent claim 9, are deemed allowable for the same reasons expressed above with respect to independent claim 9.

Support for the dependent claims is as follows. Support for the dependent claims 10 and 11 is found in Figs. 3 and 4 and paragraph 0022, and in Figs. 5 and 6 which show that the pulley wheel on the knife-supporting disk is much smaller than the pulley connected to the input shaft. New dependent claim 12 corresponds to original claim 3. Support for new dependent claim 13 is found in Figs. 3, 4, and 6. The path of the knife shown in Figs. 3 and 4 is consistent

with the path of a point on a circumference of a planetary gear, thereby indicating that the knife remains in one fixed position on the knife-supporting disk. Fig. 6 shows a dotted line indicating the path of the radially outermost end of the knife, this path indicating that the knife stays in one position on the knife-supporting disk. New claim 14 corresponds to original claim 4. Claims 15-17 are supported in Fig. 2 and by paragraph 0021. Claims 18-19 are supported in Fig. 5-6 and by paragraph 0026.

The application is now deemed to be in condition for allowance and notice to that effect is solicited.

It is believed that no fees or charges are required at this time in connection with the present application. However, if any fees or charges are required at this time, they may be charged to our Patent and Trademark Office Deposit Account No. 03-2412.

Respectfully submitted,

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